AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated in the following listing of all claims:

Claims 1-7. (Canceled)

8. (Original) Volume control circuitry for controlling volume incrementing in a digital wavetable audio synthesizer, wherein said synthesizer is configured to provide a volume component to wavetable data addressed by said synthesizer, comprising:

(a) a memory having a first storage location configured to store a current value of said volume component, and a second storage location configured to store a final value of said volume component, wherein said final value is directly programmed into said second storage location;

(b) a comparator coupled to said memory for periodically comparing said current value with said final value to determine if said current value is less than, greater than, or equal to said final value; and

(c) an incrementor coupled to said comparator and said memory, wherein said incrementor is configured to increment said current value in response to a determination by said comparator that said current value is less than said final value, and configured to decrement said current value in response to a determination by said comparator that said current values is greater than said final value.

9. (Currently amended) The volume control circuitry of claim [[20]] 8, wherein said first and second storage locations are registers.

10. (Currently amended) The volume control circuitry of claim [[20]] 8, wherein when said incrementor increments or decrements said current value, said increment or decrement is by a value of one.

11. (Original) Volume control circuitry for controlling volume incrementing in a digital wavetable audio synthesizer, wherein said synthesizer interfaces and provides audio enhancement to a host computer of the type including a central processor, and wherein said

synthesizer is configured to provide a volume component to wavetable data addressed by said synthesizer, comprising:

(a) a first storage device for storing a current value of said volume component;

(b) a second storage device configured to store a final value of said volume component, wherein said final value is programmed into said second storage device by the central processor;

(c) a comparator coupled to said first and second storage devices for periodically comparing said current value with said final value to determine if said current value is less than, greater than, or equal to said final value; and

(d) an incrementor coupled to said comparator and said first storage device, wherein said incrementor is configured to increment said current value in response to a determination by said comparator that said current value is less than said final value, and configured to decrement said current value in response to a determination by said comparator that said current value is greater than said final value.

12. (Currently amended) The volume control circuitry of claim [[23]] 11, wherein said first and second storage devices are registers.

13. (Currently amended) The volume control circuitry of claim [[23]] 11, wherein when said incrementor increments or decrements said current value, said increment or decrement is by a value of one.

14. (Original) Volume control circuitry for controlling volume incrementing in a digital wavetable audio synthesizer, wherein said synthesizer is configured to provide at least one volume component to wavetable data addressed by said synthesizer, comprising:

(a) a memory having first storage locations for storing current values of each one of said at least one volume component, and second storage locations for storing final values of said each one of said at least one volume component, wherein said final values are directly programmed into said second storage locations;

(b) a comparator coupled to said memory for periodically comparing a current value of a volume component with a final value of said volume component to determine if said current value is less than, greater than, or equal to said final value; and

(c) an incrementor coupled to said comparator and said memory, wherein said incrementor is configured to increment said current value in response to a determination by said comparator that said current value is less than said final value, and configured to decrement said current value in response to a determination by said comparator that said current value is greater than said final value.

15. (Currently amended) The volume circuitry of claim [[26]] 14, wherein said memory is a random access memory, said first storage locations comprise a first column of registers in said random access memory, and said second storage locations comprise a second column of registers in said random access memory.

16. (Currently amended) The volume control circuitry of claim [[26]] 14, wherein when said incrementor increments or decrements said current value, said increment or decrement is by a value of one.

17. (Currently amended) The volume control circuitry of claim [[27]] 15, wherein when said incrementor increments or decrements said current value, said increment or decrement is by a value of one.

18. (Currently amended) Volume control circuitry for controlling volume incrementing in a digital wavetable audio synthesizer, wherein said synthesizer is configured to provide a volume component to wavetable data addressed by said synthesizer, comprising:

(a) memory means having a first storage location for storing a current value of said volume component, and a second storage location for storing a final value of said volume component~~, wherein said final value is directly programmed into said second storage location;~~, wherein said final value is directly programmed into said second storage location;

(b) comparing means coupled to said memory for periodically comparing said current value with said final value to determine if said current value is less than, greater than, or equal to said final value; and

(c) incrementing means coupled to said comparing means and said memory means for incrementing said current value in response to a determination by said comparing means that said current value is less than said final value, and decrementing said current value in response to a determination by said comparing means that said current value is greater than said final value.

19. (Original) Volume control circuitry for controlling volume incrementing in a digital wavetable synthesizer, wherein said synthesizer interfaces and provides audio enhancement to a host computer of the type including a central processor, and wherein said synthesizer is configured to provide a volume component to a wavetable data addressed by said synthesizer, comprising:

(a) a first storage means for storing a current value of said volume component;

(b) a second storage means for storing a final value of said volume component, wherein said final value is directly programmed into said second storage means by the central processor;

(c) comparing means coupled to said first and second storage means for periodically comparing said current value with said final value to determine if said current value is less than, greater than, or equal to said final value; and

(d) incrementing means coupled to said comparing means and said first storage means for incrementing said current value in response to a determination by said comparing means that said current value is less than said final value, and decrementing said current value in response to a determination by said comparing means that said current value is greater than said final value.

20. (Original) Volume control circuitry for controlling volume incrementing in a digital wavetable audio synthesizer, wherein said synthesizer is configured to provide one or more volume components to wavetable data addressed by said synthesizer, comprising:

(a) memory means having first storage locations for storing current values of each volume component, and second storage locations for storing final values of each volume component, wherein said final values are directly programmed into said second storage locations;

(b) comparing means coupled to said memory means for periodically comparing a current value of a volume component with its final value to determine if said current value is less than, greater than, or equal to said final value; and

(c) incrementing means coupled to said comparing means and said memory means for incrementing said current value in response to a determination by said comparing means that said current value is less than said final value, and decrementing said current value in response to a determination by said comparing means that said current value is greater than said final value.

21. (Currently amended) A method of controlling volume incrementing in a digital wavetable audio synthesizer, wherein said synthesizer interfaces and provides audio enhancement to a host computer of the type including a central processor, and wherein said synthesizer is configured to provide one or more volume components to wavetable data addressed by said synthesizer, comprising the steps of:

(a) programming a current value of a volume component into a first storage device;

(b) programming a final value of said volume component into a second storage device by the central processor;

(c) reading said current and final values and comparing said values to determine if said current value is less than, greater than, or equal to said final value;

(d) incrementing said current value if said current value is less than said final value, ~~determining~~ decrementing said current value if said current value is greater than said final value, [[or]] and not changing said current value if said current value is equal to said final value;

(e) writing said current value resulting from step (d) in said first storage device; and

(f) periodically repeating steps (c)-(e) unless or until it is determined in step (c) that said current value is equal to said final value.

22. (Currently amended) The method of claim [[33]] 21, wherein said first and second storage devices are registers.

23. (Currently amended) The method of claim [[34]] 22, wherein said registers are a part of a register array.

24. (Currently amended) The method of claim [[33]] 21, further comprising the step of programming said final value into both said first and second storage devices to enable said volume component to be instantly changed to said final value as opposed to incremented or decremented until said final value is reached.

25. (Currently amended) The method of claim [[33]] 21, wherein in step (d), if said current value is incremented or decremented, said increment or decrement is by a value of one.